

Title: A Topological-Geometric Epistemology of Cosmic Space -- External Correctional Force and the Theory of Stabilized Central Structures

1. Introduction: Redefining the Concept of Space

Modern physics interprets space as a measurable physical structure--either as space-time curvature in general relativity or the vacuum state in quantum field theory. This theory, however, proposes an alternative view: space is a topological-geometric formation of thought, theory, and informational structures.

In this view, space is not an empty physical container but a structured field in which thought and information exist. This structure is stabilized by an external Correctional Force, fixing its core structure into a constant form.

2. Topological-Geometric Structures of Thought and Theory

Every complete cognitive or theoretical system can be expressed through a topological-geometric structure. This structure resembles a galaxy and is composed of:

- Core structure: fundamental axioms and propositions
- Spiral arms: derived concepts, applications, and logical extensions

This analogy implies that ideas and information have a spatially structured existence.

3. External Correctional Force: Fixation and Ordering of Core Structures

Correctional Force: A hypothesized higher-order mechanism of stabilization and alignment that,

while not yet observable, organizes energy, information, and topological structure. It may take the form of a physical field or a higher-dimensional informational field.

This force, like an artificial sun, fixes the central components of a structure and transforms previously fluid core concepts into constant reference points.

Example: The concept of "cost-benefit" may fluctuate under different conditions, but after intervention by the Correctional Force, it behaves like a constant ratio within a system.

4. Definition of Space: A Stabilized Topological Structure

Space is defined as:

"A topological-geometric structure in which central components have been stabilized by an external Correctional Force."

In this framework, space is not merely a coordinate grid but a structured field of high-order thought, information, and energy.

5. Definition of Time: Internal Variation within Shared Structure

Time is defined as:

"The variation of information and energy within a system that shares identical topology and geometry."

Time in this theory is not absolute nor relative in the Einsteinian sense but a dynamic phenomenon that emerges from shared structural properties. This implies:

- Quantum entanglement: synchronization across distance due to shared topological states
- Galactic synchronization: when inner and outer regions share core structures, time progression is synchronized

6. Micro-Macro Extension of Central Structures

When the Correctional Force acts, central structures maintain consistent topologies from microscopic (e.g., electrons) to macroscopic (e.g., galaxies) scales. This consistency results in uniform rules for energy, efficiency, and responsiveness, aligning with the universality of natural laws.

7. Proposed Observation Strategy: Grid-Based Analysis of Galactic Synchronization

Background and Purpose:

Conventional cosmology explains galaxy formation through initial conditions and local gravity. This proposal aims to evaluate the alternative theory that "time synchronization arises within shared topological structures of space." It suggests dividing the universe into topological grid cells and analyzing star formation patterns in structurally similar galaxies.

Concept and Methodology:

- Divide the observable universe into 3D grid cells
- Select structurally similar galaxies within each cell
- Compare star formation rates (SFR), starburst timings, and core activity
- Analyze differences between neighboring cells to assess topological alignment effects

Grid Cell Design Variables:

- Spatial coordinates: RA, Dec, redshift (z or co-moving distance)

- Morphological data: Hubble type, elliptical/spiral distinction
- Orbital plane alignment: spin axis vector, inclination, position angle
- Core metrics: bulge mass, black hole mass, central density profile
- Kinematics: HI rotation curve symmetry, presence of warps
- Star formation activity: SFR over time, starburst epochs, spatial distribution of star birth

Hypothesis and Expected Outcomes:

- If galaxies within the same grid cell show statistically aligned star formation timing -> indirect evidence for temporal sharing
- If adjacent cells diverge significantly -> suggests existence of discrete topological domains

Data and Tools:

- Public datasets: SDSS, DECaLS, HST, JWST
- Analysis techniques: SED fitting, H-alpha mapping, HI curve analysis
- AI-based galaxy similarity clustering algorithms

8. Conclusion: Toward a Topological Epistemology of the Universe

This theory redefines space and time as structured forms -- topology with stabilized centers and dynamic internal variation. Space becomes a domain shaped by Correctional Forces, while time becomes a relational flow within matched structures.

Thus, the universe is not merely a collection of matter, but an organized totality of cognitive and informational structure. Tracing these central structures may become a key mission of future scientific inquiry -- with galactic synchronization offering a first clue.